

CHEMICAL BONDING

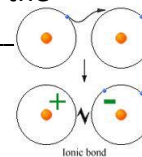
IONIC BONDING

• This bond is formed through the

_____ (lose & gain).

• Electrons are transferred to achieve _____ arrangement (filled with _____ electrons).

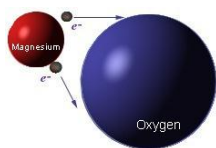
• Bond forms between ions of _____ and _____.



CATIONS

• Metals _____ to attain an achieve octet arrangement .

• Metals make positive ions called _____.



ELECTRON DOTS FOR CATIONS

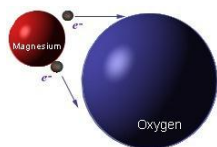
• Metals will have _____ valence electrons (usually 3 or less); calcium has only _____ valence electrons



ANIONS

• Nonmetals _____ to attain an achieve octet arrangement .

• Nonmetals make negative ions called _____.



ELECTRON DOTS FOR ANIONS

• Nonmetals will have _____ valence electrons (usually 5 or more)

• They will _____ to fill outer shell.



IONIC COMPOUNDS

- Cations and anions are held together by _____ (+ and -)
- The bond is formed through the _____
- Ionic compounds are called _____



IONIC BONDING

Lets do an example by combining calcium and sulfur:

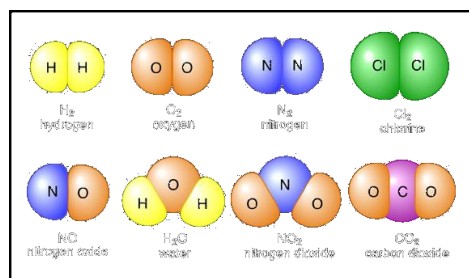


- All the electrons must be accounted for, and **each** atom will have a noble gas configuration (full with _____ electrons- which is _____).

COVALENT BONDING

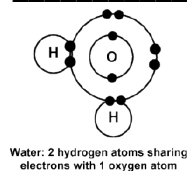
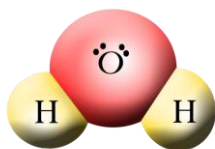
- This bond is formed through the _____
- Electrons are _____ to achieve _____ arrangement (filled with _____ electrons).
- Bonds form between two or more _____.

COVALENT BONDING



TYPES OF COVALENT BONDING

- _____ covalent bonds-form when electrons are shared _____.
- _____ covalent bonds-form when electrons are shared _____.



CHECK YOUR UNDERSTANDING

Circle the correct answer.

1. An atom that gives electrons is a/an (anion, cation).
2. Metals tend to (give, take, share) electrons.
3. The transfer of electrons forms a/an (ionic, covalent) bond.
4. Ionic compounds are called (molecules, salts).
5. When electrons are equally shared it forms a (polar, nonpolar) covalent bond.

TOMORROW WE WILL PRACTICE IONIC AND COVALENT BONDING.

